

QUANTUM FIELD THEORY AT NINETY

by

François Gieres

Even if one does not adhere to the dictum of E. Zeidler that “Renormalization cannot be understood without knowing its long and strange history”, it is both interesting and instructive to have a look at the history of quantum field theory which celebrates its 90th birthday this year (Dirac’s 1927 paper on quantum electrodynamics). After recalling some elements of its history, we outline some of the basic mathematical problems, some approaches towards their solution and some achievements.